sewage manure in Edinburgh, in Milan, and the whole of Belgium; and hoped they were now in a condition to bring those advantages nearer home, not only in converting the sewage to the use of lands near to the metropolis, but to offer it to farmers, on very low terms. The results showed, by the use of the manure they obtained double the quantity of grass, and from other results they were fully satisfied that through its use the metropolis might be amply supplied with grass-fed lamb, at least one month earlier than heretofore. In confirmation of this statement, Mr. Chadwick read an extract from a letter received from Mr. Roe, the former surveyor to this commission, which stated that by the use of liquid manure, he was last year enabled to cut five crops of grass, leaving besides a good feed, and that this year he expected to cut seven crops, worth to cowkeepers from 6*l.* to 7*l.* per acre each crop. He might mention Edinburgh as an example of the productiveness of sewage waters, and also the waters of Milan. Experiments of a most important nature had been made, not noticed in Mr. Donaldson's last report, as it was of the first consequence to surmount the difficulty of the removal of the manure, and the cost of its conveyance. By Mr. Donaldson's plan, the top dressing of an acre of land would cost but 1s. 8d., while the usual expense was 1*l.* 7s.

The Earl of Carlisle—Does that include the cost of the article?

Mr. Chadwick said that was only the cost of the delivery, but it was an established fact that they should be able to supply it at one-sixth its former amount, or to give six times the number of doses for the same charge, and the labour of an acre could be performed by a man and a boy in about forty-five minutes, and in the course of half an hour no person could distinguish in walking over the land that anything had taken place. This was an immense gain, as it did away with the question of its offensiveness, and removed the objection in a sanitary point of view to the use of this manure. With these advantages, it might be asked, why not advance the state of the land in the vicinity of the metropolis? Mr. Donaldson had stated that on all the lands irrigated he found the crops look better, except on the undrained lands, of which there was a great deal in the vicinity of London, of pestilential marshes in almost their primitive condition. The consumption of this manure would not be impeded by a distance of twenty or thirty miles, provided large quantities were used, for beyond the metropolis, in the sandy lands it might be used with advantage, and a strong manure obtained for about 2s. per acre. There had, unfortunately, been great obstacles to their proceedings in various ways, and necessarily a corresponding delay in their operations; but great works were now in progress, and with the most promising results. A committee had been formed, consisting of Sir John Burgoyne, Sir H. de la Beche, Captain Dawson, and Captain Vetch, of the Royal Engineers, who were considering the best means available of getting rid of the pollution of the Thames, and were seconded in their labours by the Sewage Manure Committee. He hoped, therefore, on the completion of the survey, they should be enabled to distribute the sewage that at present flowed into it at a distance of 20 or 30 miles from the metropolis. There were many persons who could not see what relation these measures, or agricultural land drainage, had to do with the sewerage of the urban districts; but he contended that the health of the metropolis was mainly dependent on the external operations. There were other questions under consideration, and amongst them a plan for intercepting the sewage, and conveying it to an immense reservoir at the Isle of Dogs; and as to how they could get by the docks;—all subjects of considerable importance. However, the whole question would be examined, and fully reported upon by the officers and engineers of the commission. He concluded by moving the adoption of the recommendation of the Sewage Manure Committee.

Mr. C. Johnson seconded the motion, and said that the grand object in the interception of the sewage of the metropolis was, that there was sufficient of it poured into the Thames to irrigate 1,000 acres of land daily, allowing at the rate of 250 tons per acre; which would yield a great return of revenue for any expenses incurred. They must, however, look forward to the day when they could remove this sewage to a greater distance from London than they were now justified in announcing, and this might be done without putting the public to any expense. There were large breadths of land in Sussex, on the banks of the Crouch in Essex, and in Hertfordshire, where it might be used with the most advantageous results. They proposed to carry it through open or closed pipes, according to the facilities given. At present all sewage was carried through closed pipes.

Mr. Chadwick remarked, that having taken the average drainage of 1,000 houses for sixteen hours, they found that, with an ordinary flow, *the whole of the sewage of the metropolis could be passed through a three-feet pipe.*

Mr. Slaney felt the deepest interest in the question, and had the greatest respect for the opinions of his friend Mr. Chadwick; but thought that it was extremely desirable, for sake of the success of their endeavours, that the advantages should not be placed in too broad or too favourable a point of view. He had no objection to the form proposed, and that they should receive tenders for the sewage, but that it would not be wise to go to large expenses until they were well assured of the success of their experiments. The statement that had been made by Mr. Chadwick, and supported by Mr. Johnson, would go before the public, and no doubt its merits would be well sifted and tested, and then, if satisfied with the practicability of the plan, it would be taken up by enterprising individuals, not alone in the metropolis, but in many provincial towns, whose situation for its use was much better than the lands near to London. In the high lands particularly it would be of great value. It appeared that 18,000 acres of land could be manured with 250 tons per acre, and taking this to increase its value but 10*s.* per acre, at 6 per cent., it would then yield an annual increase of 200,000*l.*, and therefore be believed that numerous parties would be found willing to come forward, and by themselves carry out these important results and advantages.

Lord Ebrington was as desirous as Mr. Slaney to understate, rather than otherwise, the advantages to be derived, but must altogether demur to the estimate of 10*s.* per acre as the increased value from this irrigation. He was cognizant of a fact that, in Devonshire, a clear stream of water merely being passed through a track of land, increased its value from 2*l.* to 3*l.* per acre; but to give but 10*s.* per acre as the increased value from sewage manure was quite out of the question. He would mention that the Duke of Portland had converted land worth not more than 7*s.* per acre into water meadows, by means of the sewage received from the town of Mansfield, which was not very strong, and its value had been increased to 14*l.* per acre. In Edinburgh, too, the value had been raised from 5*s.* to 25*l.* per acre. Such being the case, he believed the calculations of Mr. Johnson were not overstated in giving the increased value at 10*l.* to 12*l.* per acre. He found that water could be conveyed 5 miles at 2½*d.* per ton, and therefore the charge of conveying fresh water to towns need hardly differ from the cost of conveying the dirty water back. Pure water was not more necessary in towns than the fertilizing fluid was to the farmers for the purposes of vegetation.

Dr. Southwood Smith said as to the operation of the fluid in a sanitary point of view, he found that the deodorising fluid entirely destroyed the offensiveness of the manure, increasing at the same time its value to the land. He had himself tried experiments upon two acres of land, and had used a great deal of the most offensive manure, but by applying deodorisers, in half an hour not the slightest odour was perceptible. He used nitrate of lead, which was very cheap.

The motion was put and unanimously agreed to.

Amendment of the Sewers Act.—A recommendation was received from the Works' Committee, "To consider as to representing to her Majesty's Government the necessity of applying to Parliament for amended powers."

Mr. Bullar, in support of this recommendation, said the cleansing operations in one district were brought to a complete stand. By the decision of Mr. Burrell, under the provisions of the Police Act, they were prevented from cleansing cesspools in the day time, and in their endeavours to conform to this decision by cleansing them at night, they were met with a fresh difficulty, the Chelsea Water Company then refusing to supply them with water; so that they were prevented from doing the work either by night or by day.—This subject led to a short conversation, and it was agreed that the heads of a Bill be drawn up by the Bye Laws Committee, and transmitted to her Majesty's Government for presentation to Parliament.

A resolution was passed that all fossils, coins, &c., found in the excavation of works under the commission, be the property of the commission.

THE NEW BUILDINGS' BILL.—Your remark last week was loudly called for. It is exceedingly desirable that the intended Buildings' Bill should be passed through Parliament without further delay. When we know that the amendments proposed occupied a commission, supposed to be well able from their practical experience to deal with them, several months, that this commission was appointed by the noble lord at the head of the Woods and Forests, there would seem to be little cause for delay, and I cannot but think that somewhere or other there must be apathy or inattention to the wishes of those interested in the amendment of the present inadequate piece of legislation. A. B.

Miscellanea.

PROJECTED WORKS.—Advertisements have been issued for tenders, by 19th inst., for the erection of baths and washhouses in Kent-street, Birmingham; by 25th, for certain repairs, and painting, whitewashing, &c., at St. Martin's workhouse; by 3rd July, for constructing a new sluice, and other works at Outwell; by 6th July, for relaying the carriage way, &c., of High-street and Spital-square; by 30th inst., for putting up new roof on Kirton in Lindsey parish church; by 25th, for the various works to be done in erecting the York county hospital; by 25th, for the erection of a granary and dwelling-house at Huntingdon; by 23rd, for alterations and additions at Peterborough union workhouse; and by 26th, for copper, gas-fittings, &c., lead, zinc, glass, nails, screws, and other stores, for the Lancashire and Yorkshire Railway.

CUTHBERT DECORATIONS.—At the last meeting of the Archæological Institute, held on the 1st inst., drawings of two ancient reredos, recently discovered during some alterations in the church of St. Cuthbert, at Wells, Somerset, as mentioned by us some time since, were presented, and detailed descriptions given. One reredos was found in "Tanner's Chauntry," and presents a series of nineteen gorgeously carved and gilded and elaborately groined canopied niches, some of which contained mutilated figures, with scroll and descriptions, such as are usually represented in the history of Jesse. The other is of a still more highly enriched character, and was found in the Lady Chapel: it has two rows of niches and pedestals, five in each row. Previously to these discoveries, a fine painting of the "Salvator Mundi" had been found on the walls of the chapel of the Holy Trinity in the same church. The Marquis of Northampton in some observations on the frequent discovery of the ancient decorations of our churches, mentioned to the meeting some wall frescoes (?) which, on removing some plaster in the church at Castle Ashby, he had found decorating the splay of one of the chancel windows. These were in outline, and bore no traces of having been coloured originally. The style of art was of about the date of the fifteenth century.

SOCIAL IMPROVEMENTS.—Under this head Mr. Charles Cochrane has published a sensible address on a broad-side, drawing attention to the Acts of Parliament which afford to the public a power to remedy most of the evils relating to bad drainage, overflowing cesspools, nuisances of every kind, offensive privies, filthy streets, courts, and alleys, expensive means of bathing and washing, impure and expensive water, fetid and expensive dwellings for the poor, the overcrowding of churchyards, &c., evils which tend to retard the social progress of the human race. In conclusion, he says wisely, "local meetings will prove of service; but care must be taken that the discussions are conducted free from any angry or personal feelings. A temperate, conciliatory, course is almost sure finally to win over the most prejudiced or the most obstinate. Above all things, never allow party or political questions to be obtruded on your meetings convened for social purposes."

RAILWAY JOTTINGS.—The first tube of the Britannia-bridge is to be floated on Tuesday, 19th inst., at an early hour, unless the weather induce a postponement till next morning.——The works of the Tunbridge Wells and Hastings Railway are now in active progress from Tunbridge Wells southwards, to near Ticehurst. Gangs of men are working night and day the heavy tunnels at Wadhurst and Strawberry-hill, which give employment to upwards of 1,000. Tunnel bricklayers seem much in request, getting high wages. Eight large brick-fields are in full operation.——A correspondent of the *Gateshead Observer* describes the railway bridge at Yarm as spanning the river Tees "by two oblique arches of 66 feet span each, built entirely of stone (and not a suspension bridge, as the *Herald* says.) There are at the north side of the river arches three land arches, and at the south side thirty-eight, making altogether forty-three arches. The land arches are 39 feet span. The height from low water to the rail is about 68 feet; and the average height of the land arches, from the surface of the ground to the rail, about 55 feet."